



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,088	10/10/2003	Hamid Mahmood	71-493-1485	9198
7380 7590 04/27/2009				
SMART & BIGGAR P.O. BOX 2999, STATION D 900-55 METCALFE STREET OTTAWA, ON K1P 5Y6 CANADA				
EXAMINER				
ABELSON, RONALD B				
ART UNIT		PAPER NUMBER		
2419				
NOTIFICATION DATE		DELIVERY MODE		
04/27/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jstlouis@smart-biggar.ca  
acyablonski@smart-biggar.ca  
slryan@smart-biggar.ca

### Office Action Summary

**Application No.**

10/682,088

**Applicant(s)**

MAHMOOD ET AL.

**Examiner**

RONALD ABELSON

**Art Unit**

2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 April 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-29 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 9/11/07 and 10/10/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-8, 11, 12-18, 21-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Alriksson (US 6,977,938) in view of Dolganow (US 2006/0123110) and McAllister (US 2001/0010681) and IEEE 100 Dictionary.

Regarding claims 1, 14, 24, 27, and 28 Alriksson teaches a method of routing packets from a wireless communications terminal (mobile networks, source routing, col. 3 lines 3-6). Note, in source routing, the route is chosen at the terminal.

Although Alriksson teaches wireless links (mobile networks), the reference is silent on receiving, via a respective wireless link from at least one of a plurality of wireless access nodes forming a network, network information relating to links between nodes.

Dolganow teaches receiving, via a respective link from at least one of a plurality of access nodes forming a network, network information relating to links between nodes (advertising available resource information, source routing protocol uses available resource advertisements for identifying a path, abstract, resource information, available bandwidth, [0033]).

Alriksson is silent on selecting a route via the network for packets from the terminal / 'source node' in dependence upon the network information and supplying packets with information relating to the selected route.

Dolganow teaches selecting a route via the network for packets from the terminal in dependence upon the network information and supplying packets with information relating to the selected route (source routing protocol uses the available resource advertisement for identifying a path, abstract, path selected by the source node, [0037], source node uses these metrics to choose the route, [0048]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Alriksson by receiving, via a respective wireless link from at least one of a

plurality of wireless access nodes forming a network, network information relating to links between nodes, selecting a route via the network for packets from the terminal / 'source node' in dependence upon the network information, and supplying packets with information relating to the selected route, as suggested by Dolganow. This modification can be performed by transmitting available resource advertisement messages as show by Dolganow. This modification would benefit the system by ensuring the terminals / 'source nodes' choose a route based upon the current available bandwidth between the links.

The combination is silent on selecting a route in dependence upon information dependent upon wireless communications between the terminal and at least one of the nodes.

McAllister teaches selecting a route in dependence upon information dependent upon communications between the terminal / 'source node' and at least one of the nodes (link cost, [0007]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by selecting a route in dependence upon information dependent upon

communications between the terminal / 'source node' and at least one of the nodes, as shown by McAllister. This modification would benefit the system by ensuring that the chose route is affordable to the end user.

Although the combination teaches selecting a route from a 'source node', the combination is silent on selecting a route from the terminal.

Like the combination, IEEE 100 Dictionary teaches source routing. Furthermore, the reference teaches selecting a route from the terminal (transmitter must know the route to the destination, capability of the source to specify the path).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by selecting a route from the terminal, as shown by IEEE 100 Dictionary. This modification can be performed according to the teachings having the network also send the routing information to the terminals as well as the nodes. This modification would benefit the system in the case wherein the terminal is connected to a plurality of source nodes and the terminal decides which source node is optimal for routing.

Regarding claim 2, the terminal, monitoring a status of the selected route (Dolganow: source routing protocol uses the available resource advertisement for identifying a path, abstract).

Regarding claim 3, in the terminal, receiving and monitoring network information to determine a status of the selected route and, selectively in dependence upon the determined status, selecting a new route via the network for packets from the terminal (Dolganow: source routing protocol uses the available resource advertisement for identifying a path, abstract).

Regarding claims 4 and 16, selecting a route including wireless communications between the terminal and a different one of the nodes (Alriksson: mobile networks, source routing, col. 3 lines 3-6).

Regarding claims 5, 6, the links between the nodes comprise wireless communications links (Alriksson: mobile networks, source routing, col. 3 lines 3-6).

Regarding claims 7, 17, 21, and 23, in addition to the limitations already addressed, the network information comprises Quality of Service parameters (McAllister: quality of service, [0007]).

Regarding claims 8 and 18, network information comprises an available bandwidth for each link between nodes in at least a part of the network (Dolganow: resource information, available bandwidth, [0033]).

Regarding claims 11, 12, 22, 25, and 29, a wireless communications terminal arranged for operation in accordance with the method of claim 4 (Alriksson: mobile networks, source routing, col. 3 lines 3-6).

Regarding claims 13 and 26, a plurality of wireless access nodes, a plurality of links between nodes for packet



communications in the network, and at least one wireless communications terminal as claimed in claims 12, 25 for wireless communications with the wireless access nodes, the wireless access nodes being arranged for supplying to the terminal said network information relating to links between the nodes (Alriksson: mobile networks, source routing, col. 3 lines 3-6).

Regarding claim 15, in the terminal, monitoring network information to determine a status of the selected route and, selectively in dependence upon the detected status, selecting a new route via the network for packets from the terminal (Dolganow: advertising available resource information, source routing protocol uses available resource advertisements for identifying a path, abstract, resource information, available bandwidth, [0033]).

3. Claims 9 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Alriksson, Dolganow, and McAllister, as applied to claims 6 and 14 above, and further in view of Miernik (US 7,155,215).

Although the combination teaches network information, the combination is silent on network information comprises a current delay for each link between nodes in at least a part of the network.

Miernik teaches the network information / QoS, comprises a current delay for each link between nodes in at least a part of the network (QoS, delays, connections).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by incorporating a link delay component in determining the QoS for each route, as suggested by Miernik. This modification can be performed in software. This modification would benefit the system since link delay is an integral determinant in the QoS for data being transmitted over a network.

4. Claims 10 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Alriksson, Dolganow, and McAllister as applied to claims 6 and 14 above, and further in view of Seguin (US 7,206,295).

Although the combination teaches network information, the combination is silent on network information comprises an error

rate for each link between nodes in at least a part of the network.

Sequin teaches QoS as a function of the error rate (col. 4 lines 25-28).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by incorporating an error rate component in determining the QoS for each route, as suggested by Sequin. This modification can be performed in software. This modification would benefit the system since the error rate is an integral determinant in the QoS for data being transmitted over a network.

### ***Response to Arguments***

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONALD

Application/Control Number: 10/682,088  
Art Unit: 2419

Page 11

ABELSON whose telephone number is (571)272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ronald Abelson  
Primary Examiner  
Art Unit 2419

\*\*\*

Application/Control Number: 10/682,088

Page 12

Art Unit: 2419

/Ronald Abelson/

Primary Examiner, Art Unit 2419